

Programming Assignment 10

Prof. Zhang

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This lab practices inheritance and polymorphism, by extending upon the hierarchy of classes, Employee, HourlyEmployee and SalariedEmployee. Use the following command to copy given codes (as studied in class):

CopyEmployees

Requirement

1. Add a destructor for all class, in which you shall only cout a statement stating that the destructor of the given class is being called.
2. At the end of the program, which class's destructor is being called when the dynamically allocated HourlyEmployee or SalariedEmployee objects are deleted? How to correct this?
3. Add a print(ostream & output) function to all classes, which display the employee's info to the output. Make this function a **virtual** function.
4. Define a new class, Administrator, as a derived class of SalariedEmployee. The class should include a **title** field (a private member) for the administrator, which stores a string such as "CEO", "director", "CFO", and so on.
 - A. declare and implement a no-parameter constructor for the class, in which you shall call its parent class's no-parameter constructor explicitly, and initialize title to empty string.
 - B. declare and implement a constructor that takes as parameter: name, SSN, weekly salary and title, and initialize the object accordingly with these info.
 - C. declare and implement a destructor: no real work is done, only cout a statement saying that Administrator class's destructor is being called.
 - D. declare and implement two member functions: one to set title, another to get title.
 - E. redefine print_check() function: in which you shall first output the title of the administrator, and then call the parent class's print_check() function.
 - F. redefine print() function: in which you shall first output the title, and then call parent class's print() function.

5. In the main.cpp files,
- G. extend main() to add at least one more employee who's an administrator, and store it into the Employee array, and also the array of Employee pointers.
 - H. Add two functions in the main.cpp, and call them in the main to test them.
- PrintCheck (Employee employee) which prints out one single employee's pay check .
 - PrintEmployees (Employee employees[], int len) prints all employee info, including name, ssn, salary (for salaried employee), title (for administrator), hour and rate (for hourly employee)
3. Write down in the comment part of the above two functions, do they work? Why? If not, comment out the above two functions, and redesign the two functions (hint: parameter types) to make the code works.

To submit:

submit2000 LAB10 Employee.h
submit2000 LAB10 Employee.cpp

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